

CLAIMS

What is claimed is:

1. An optical mouse comprising:
an optical mouse sensor; and
5 a mechanical displacement sensor coupled to said optical mouse sensor to power up the optical mouse sensor from a standby mode when movement of said optical mouse is detected by said mechanical displacement sensor.
- 10 2. The optical mouse of Claim 1 wherein said mechanical displacement sensor comprises:
a switch which sets to a first state when no movement is detected and sets to a second state when movement is detected, wherein said first state corresponds to said standby mode and said second state corresponds to a powered-up mode.
- 15 3. The optical mouse of Claim 1 wherein said mechanical displacement sensor comprises:
a buffer that outputs a high logic signal when said switch closes.
- 20 4. The optical mouse of Claim 1 wherein during said standby mode of said optical mouse sensor, an analog and digital core of said optical mouse sensor is powered down.
5. The optical mouse of Claim 1 wherein said optical mouse is wireless.

6. The optical mouse of Claim 1 wherein said mechanical displacement sensor comprises an integrated add-on to an optical mouse sensor circuit.

7. A method of minimizing power consumption of an optical mouse
5 comprising:

detecting movement of said optical mouse by a mechanical displacement sensor within said optical mouse;

causing the optical mouse to go into a standby mode of operation when the mechanical displacement sensor detects that the optical mouse is motionless; and

10 taking said optical mouse sensor out of said standby mode of operation when said mechanical displacement sensor senses that the optical mouse is moved.

8. The method as recited in Claim 7 further comprising:

15 setting a switch of said mechanical displacement sensor to a first state when said optical mouse is motionless; and

setting said switch of said mechanical displacement sensor to a second state when said optical mouse is moved.

9. The method as recited in Claim 7 wherein said switch defaults to an open state
20 when no movement is detected.

10. The method as recited in Claim 9 wherein said mechanical displacement sensor further comprises a buffer that outputs a high logic signal when said switch closes.

11. The method as recited in Claim 7 further comprising:
powering down an analog and digital core of said optical mouse sensor when
said optical mouse sensor is in said standby mode of operation.

5 12. The method as recited in Claim 7 wherein said mechanical displacement
sensor is integrated with an optical mouse sensor circuit.

13. The method as recited in Claim 7 wherein said mechanical displacement
sensor and said optical mouse sensor circuit comprise components manufactured on a
10 same circuit board.

14. The method as recited in Claim 7 wherein said optical mouse sensor
consumes no current in said standby state.

15 15. The method as recited in Claim 7 wherein said optical mouse comprise a
wireless device.